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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,294	10/26/2001	Lawrence J. Karr	50037.65USU1/177809.2	7483

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EXAMINER	
NGUYEN, DUC M	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/044,294	KARR ET AL.	
	Examiner	Art Unit	
	Duc M. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,40-42 and 44-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 40-42, 44-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to applicant's response filed on 1/2/07. Claims 1, 40-42, 44-61 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **40-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lorang et al** (US Pat No. **5,548,814**) in view of **Gaskill** et al (US **5,301,358**).

Regarding claim **40**, **Lorang** discloses a wireless communication (paging) system having local and wide-are reception modes, comprising :

- a broadoast transmitter (20) configured to transmit to a device (12) over a FM subcarrier channel to a wide area (see Figs. 1, 5-6, col. 5, lines 18-22, col. 8, lines 21-28 regarding wide area, col. 10, lines 63-64 regarding standard paging FM architecture); and

- a localcast transmitter (42, 96, 112) coupled to a data source and configured to transmit over a local area and in a locally-unused FM frequency (see Figs. 1, 4, 6 and col. 8, lines 21-28 regarding local area, col. 10, lines 62-63 regarding standard FM architecture as a candidate for the lower power two-way link);

- a mobile device (PDU 10) including a transceiver (see **Fig. 10**) and is configured to receive and transmit data from/to the localcast transmitter, and further configured to receive transmitted data from a wide-area broadoast transmitter (see col. 12, lines 44-45) and from another mobile device (see col. 7, lines 15-16);

- different information for local information (data transfer information) and broadcast (Resquest for location message) information (see col. 7, lines 49-67);

As to the limitation regarding "conveying information to a user interface of the mobile device", it is noted that a mobile device would inherently comprise a user interface in order to encode and transmit an information signal, or in order to receive (or convey) and decode an information signal. For examples, the mobile device would comprise an interface to transmit/receive a message, an interface for presenting data to a user (i.e, a display, a speaker), an interface for input/output operations such as keypad, menu display, etc. (see also col. 6, lines 5-20 regarding interface 62).

Further, since the structure of the circuits in Fig. 10 would illustrate a transceiver with a broadest reasonable interpretation because of the sharing of frequency synthesizer, MUX, protocol processor, RAM, and ROM components, the claimed limitation regarding a transceiver for receiving in a broadcast mode, receiving and conveying information in a localcast mode is made obvious by **Lorang**.

However, Lorang fails to teach a variable tuning antenna for the mobile paging device. However, Gaskill teaches a variable tuning antenna for a mobile device (see Abstract, Fig. 1), wherein the antenna is periodically retuned during a listener interval, prior to the receipt of a packet of information (see col. 3, lines 1-20). Therefore, it would

have been obvious to one skilled in the art at the time the invention was made to incorporate teaching of Gaskill to Lorang to provide a variable tuning antenna for the paging transceiver in Lorang as well, for improving data reception quality. Since the broadcast data in Lorang would implicitly be scheduled for transmission (see Lorang, col. 5, lines 17-22), Lorang in view of Gaskill, would teach a mobile transceiver that adjusts a variable tuning element configured to tune an antenna in response to a scheduled message reception as claimed, for improving data reception quality.

Regarding claim **41,** the claim is rejected for the same reason as set forth in claim 40 above. In addition, it is clear that Lorang would disclose different transmission format for local mode and broadcast mode as claimed (see col. 9, lines 40-44, col. 11, lines 29-31 and col. 12, lines 34-41). Also note that different data rates would obviously comprise different modulation schemes.

3. Claims **1, 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lorang** in view of **Gaskill** and further in view of **Miyaki et al** (US Pat No. **5,903,618**).

Regarding claim **1,** the claim is rejected for the same reason as set forth in claim 40 above. In addition, it is clear that **Lorang as modified** would disclose all the claimed limitations, see claim 40, except for a peer-to-peer mode. However, it is noted such a peer-to-peer mode is known in the art as disclosed by **Miyake** (see Fig. 1 and col. 4, lines 25-30). Since **Larang** and **Miyake** are analogous arts, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above teaching of **Miyaki** to **Larang** for further providing a peer-to-peer mode to PDUs

in **Larang** as well, thereby providing a mobile device with a peer-to-peer mode as claimed, so that a groups of pagers which are close to each other can communicate to each other without the need for a signal has to be transmitted via a base station or a service center, thereby the time for communication between the two terminals can be shortened (see **Miyaki**, col. 1, line 64 – col. 2, line 2). Note that the peer-to-peer mode and the localcast mode would obviously use the same transmission bandwidth of a bi-directional (or two-way) communication link.

Regarding claim **42,** the claim is rejected for the same reason as set forth in claim 1 above. In addition, **Lorang** would disclose different transmission format for local mode and broadcast mode as claimed (see col. 9, lines 40-44, col. 11, lines 29-31 and col. 12, lines 34-41), wherein Lorang in view of Miyake would teach a third format for the peer-to-peer mode.

4. Claims **44-61** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Larang** in view of **Gaskill** and **Miyaki,** and further in view of **Chadwick et al** (US **5,442,646**).

Regarding claim **44,** the claim is rejected for the same reason as set forth in claim 1 above. In addition, although **Larang** is silent on components of a broadcast transmitter (see Fig. 3), it is noted that components such as I/O controller, interfaces, encoder, frequency control processor, data packets, subframes and frames at a subcarrier and subcarrier signal generator as described in **Chadwick** (see Fig. 2, col. 4, line 36 – col. 34) for encoding and transmitting digital data into control packets are

components obviously required for either the localcast transmitter or the broadcast transmitter, in order to encode and transmit digital data into control and data packets in subframes or frames. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine and modify the above teachings of **Chadwick**, **Larang and Miyaki** for provide components as claimed, in order for a transceiver being able to reassemble input data into packets for re-transmission.

Regarding claims **45-49**, they are rejected for the same reason as set forth in claim 1 above. In addition, since such components (data and uplink signaling information) as recited in the claims are known in the art (Official Notice), in order for a transceiver to receive input data, reassemble data into packets for transmission, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teachings of **Chadwick**, **Larang** and **Miyaki** for provide components as claimed, in order for a transceiver being able to reassemble input data into packets for re-transmission.

Regarding claim **50**, the claim is rejected for the same reason as set forth in claim 42 above. In addition, although **Larang** is silent on components of a localcast transmitter (see Fig. 3), it is noted that components such as I/O controller, interfaces, encoder, frequency control processor, data packets, subframes and frames at a subcarrier and subcarrier signal generator as described in **Chadwick** (see Fig. 2, col. 4, line 36 – col. 34) for encoding and transmitting digital data into control packets are components obviously required for either the localcast transmitter or the broadcast transmitter, in order to encode and transmit digital data into control and data packets in

subframes or frames. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teachings of **Chadwick**, **Lorang** and **Miyaki** for provide components as claimed, in order for a transceiver being able to reassemble input data into packets for re-transmission.

Regarding claims **51-55**, they are rejected for the same reason as set forth in claim 50 above. In addition, since such components (data and uplink signaling information) as recited in the claims are known in the art (Official Notice), in order for a transceiver to receive input data, reassemble data into packets for transmission, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teachings of **Chadwick, Miyaki** and **Larang** for provide components as claimed, in order for a transceiver being able to reassemble input data into packets for re-transmission.

Regarding claim **56**, it is rejected for the same reason as set forth in claim 42 above. In addition, **Larang** discloses microprocessors, interfaces, antenna, RAM and EEPROM memory for the pager (see Fig. 10 and col. 11, line 25 – col. 12, line 41). Further, although **Larang** fails to disclose a realtime component, it is noted that such realtime component is known in the art (Official Notice), in order for a transceiver to synchronize for receiving and transmitting data packets in certain timeslots. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teachings of **Chadwick, Miyaki** and **Larang** to provide a realtime components as claimed, in order to receive and transmit data packets synchronously.

Regarding claims **57-58**, they are rejected for the same reason as set forth in claim 42 above. In addition, **Larang** discloses a two-way PDU being able to receive or transmit a signal to another device (see col. 7, lines 15-16).

Regarding claim **59**, it is rejected for the same reason as set forth in claim 42 above. In addition, it is clear that when receiving a signal from another device, such signal is transmitted/received in a localcast mode from PDUs.

Regarding claim **60**, it is rejected for the same reason as set forth in claim 42 above. In addition, **Larang** discloses the device receive both transmission modes using substantially the same circuitry (see Fig. 10).

Regarding claim **61**, the claim is rejected for the same reason as set forth in claim 56 above.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 40-42, 44-61 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See the attached PTO-892.

8. **Any response to this final action should be mailed to:**

Box A.F.

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for formal communications intended for entry)

(571)-273-7893 (for informal or draft communications).

Hand-delivered responses should be brought to Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893, Monday-Thursday (9:00 AM - 5:00 PM).

Or to Matthew Anderson (Supervisor) whose telephone number is (571) 272-4177.

Duc M. Nguyen

Mar 20, 2007